ABSTRACT

A one-way valve with an annular nozzle. The valve body is a truncated cone with an interior fluid manifold. The truncated cone section includes a lower retaining groove and a fluid groove. A fluid conduit connects the interior fluid manifold to the fluid groove. An elastic cylinder having an internal diameter which is smaller than the truncated cone is slipped over the truncated cone. The lower portion of the elastic cylinder slips into the retaining groove. The upper portion rests over the fluid groove. When fluid pressure within the interior fluid manifold exceeds the pressure outside the valve, fluid flows through the conduit and into the fluid groove. This pressure urges the upper portion of the elastic cylinder away from the truncated cone Fluid then flows out through an annular nozzle formed between the upper portion of the elastic cylinder and the upper portion of the truncated cone. When pressure outside the valve exceeds the fluid pressure within the interior fluid manifold, the elastic cylinder is clamped tightly against the truncated cone, thereby preventing flow back through the valve.